AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) An apparatus for use in a mobile communication system that simultaneously transmits a control message over a control channel and data over a data channel, wherein the apparatus supports hybrid automatic repeat request (HARQ), the apparatus comprising:

a physical layer for receiving the control message and the data from the control channel and the data channel respectively and for decoding the received control message and data;

a physical layer's HARQ controller for processing a result of the decoding of at least one of the received control message and data and for controlling the physical layer according to a result of the processing~~;~~,

~~wherein the HARQ controller performs an operation of a MAC layer and~~ the physical layer's HARQ controller ~~comprises~~ comprising:

~~at least~~ two HARQ state machines for receiving state information from the physical layer and determining a state transition to next state~~,~~; ~~and~~

~~a state function section for controlling the state transition of the at least two HARQ state machines depending on the result of the determining of the state transition,~~

wherein the two HARQ state machines are ~~provided only one~~ selectively enabled ~~HARQ state machine if~~ based on a number of acknowledgement/negative-acknowledgement (ACK/NAK) ~~NACK~~ processing delay ~~is 1~~ time slots ~~slot~~.

2. (Currently amended) The apparatus of claim 25 ~~1~~, wherein:

the ~~at least~~ two HARQ state machines control the state transition among a plurality of states, wherein the plurality of states includes an initial state for initializing parameters while waiting for the control message to be received over the control channel, a control message decoding state for decoding the control message, a control state for calculating a result of the control message decoding, a demodulation state for demodulating the received data, a data decoding state for turbo decoding the demodulated data, and a response state for transmitting a response based on a result of the turbo decoding.

3. (Previously presented) The apparatus of claim 1, further comprising a data path processor for controlling a processing path of data received over the data channel.

4. (Previously presented) The apparatus of claim 1, further comprising an output buffer controller for storing data obtained by demodulating and decoding data received over the data channel and outputting the stored data to the HARQ controller.

5. (Cancelled)

6. (Currently amended) The apparatus of claim 23 ~~5~~, wherein ~~an amount of~~ when the ACK/NAK processing delay ~~for the response comprises~~ is equal to 2 time slots, ~~wherein~~ each one of the two enabled HARQ state machines is alternately controlled ~~controls the state transition for~~ during the 2 time slots to process ~~for~~ the data received over the data channel.

7. (Currently amended) The apparatus of claim 6, wherein when decoding the data in the physical layer, the two enabled HARQ state machines control a transition to a waiting state until a previous decoding operation of the decoder has ended.

8. (Currently amended) The apparatus of claim 2 ~~7~~, wherein the state function section comprises:

first state processors for performing control operations of the enabled one of two HARQ state machines in the initial state;

a second state processor for performing control operations of the enabled one of the two HARQ state machines in the control state;

a third state processor for performing control operations of the enabled one of the two HARQ state machines in the demodulation state;

a fourth state processor for performing control operations of the enabled one of the two HARQ state machines in the waiting state;

a fifth state processor for performing control operations of the enabled one of the two HARQ state machines in the decoding state; and

~~sixths~~ sixth state processors for performing control operations of the associated enabled one of the two HARQ state machines in the response state.

9. (Original) The apparatus of claim 1, wherein the physical layer comprises one data channel turbo decoder.

10. (Previously presented) The apparatus of claim 1, wherein the data channel is decoded by a turbo decoder.

11. (Previously presented) The apparatus of claim 1, wherein the physical layer's HARQ controller requests a retransmission of the data from the mobile communication system when results of the decoding of the data indicate that the decoding was unsuccessful.

12. (Previously presented) The apparatus of claim 1, wherein the physical layer's HARQ controller transmits the decoded data to an upper layer when results of the decoding of the data indicate that the decoding was successful.

13. (Previously presented) The apparatus of claim 1, wherein the physical layer comprises a control channel decoder for decoding the received control messages, a demodulator for demodulating the received data, and a data decoder for decoding the demodulated data.

14. (Previously presented) The apparatus of claim 13, wherein the physical layer's HARQ controller determines whether to demodulate the data depending on the decoded control message and outputs the decoded control message to the demodulator and the data decoder when the HARQ controller determines to demodulate the data.

15. (Previously presented) The apparatus of claim 1, wherein the physical layer's HARQ controller determines whether to demodulate the data depending on the processed result and outputs the result of the decoded control message to the physical layer when the HARQ controller determines to demodulate the data.

16. (Previously presented) The apparatus of claim 1, wherein the physical layer's HARQ controller determines whether to demodulate and decode the received data depending on the result of the decoding of the control message, outputs the decoded control message to the demodulator and the decoder during demodulation, decoding the received data, and controlling the output of a response signal according to the result of the decoding of the data.

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (New) The apparatus of claim 1, wherein only one of the two HARQ state machines is enabled when the ACK/NAK processing delay is equal to 1 time slot.

23. (New) The apparatus of claim 1, wherein two of the HARQ state machines are enabled when the ACK/NAK processing delay is equal to 2 time slot.

24. (New) The apparatus of claim 23, wherein the two enabled state machines consist of an odd state machine and an even state machine.

25. (New) The apparatus of claim 1, further comprising a state function section for controlling the state transition of the two HARQ state machines depending on a result of the determining of the state transition.